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Copy 10 of 10

NRO REVIEW COMPLETED

11 April 1963

MEMORANDUM FOR THE RECORD

SUBJECT : OXCART Engine Performance

REFERENCE : [REDACTED] dated 3 April 1963, titled "Status
OXCART Engine Performance Improvement Program"

1. The purpose of this report is to comply with a request to present comparative engine performance data contained in reference memorandum in tabular form using absolute values and also to correct an error therein.
2. Attachment #1 presents this data in five columns.
 - a. The original 28K afterburner configured engine.
 - b. The 30K afterburner configured engine without the gas generator changes.
 - c. The 30K afterburner configured engine with the gas generator changes as estimated in November 1962.
 - d. The 30K afterburner configured engine with the gas generator changes as calibrated in March 1963.
 - e. Specification requirements.

Care must be exercised in interpreting this data for two reasons. The absolute values listed represent uninstalled engine performance requiring the application of numerous installation correction factors prior to the assessment of aircraft installed engine performance. Secondly, as will be noted, all the data is not necessarily at the same Mach, altitude, and thrust conditions leading to some confusion in interpretation. This is due primarily to maximum test facility limitations which differ from design cruise conditions used as the basis for calculation and estimate. Keeping the above interpretive cautions in mind, this data can be used to show the trend or differences in performance levels in going from one engine configuration to the next and in like manner can be used to reflect the differences

[redacted] 25X1
Page 1

in aircraft installed engine performance that might be expected in going from one engine configuration to the next with all other aircraft performance parameters remaining constant. At the present time aircraft performance parameters are in a state of flux.

3. Paragraph 3c of reference memorandum, which, in part, says that specific fuel consumption at the maximum thrust level forecast in Table III is 8.5% better than the specification, should be corrected to read 4.8% better than the specification. This correction does not affect any other part of the memorandum or the attachment.

SIGNED

[redacted] 25X1
Development Division
(Special Activities)

Attachment

[redacted];DD/OSA [redacted] (11 April 1963)

Distribution:

- 1 - DD/R
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- 9 - DD/OSA (CARONO)
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